(E

John M. Guynn

From: Randy Smith [rsmith@earthshell.com]
Sent: Saturday, September 17, 2005 6:03 PM
To: John M. Guynn
Subject: FW: Re-Revised Wrap plan

Attachments: Microsoft Excel 2.x

EarthShell
uPont Test Plan wr

John, here is a test plan. Note that the Papermatch grades were developed with A. Schulman and us as Eastar Bio resin as a base and talc, caco3 and tio2 fillers.

RAS

-----Original Message-----
From: Kishan Khemani
Sent: Saturday, June 23, 2001 5:52 PM
To: Jeffrey L McGlaughlin (E-mail); Jennifer M Schneider (E-mail); John Kelly (E-mail); John Nevling; Ken Atwood (E-mail); Randy Smith; Roger Byrd (E-mail); Donna Balinkie
Cc: Kishan Khemani; Lori Bowles; Simon Hodson
Subject: Re-Revised Wrap plan

Based on the learning's gleaned from previous wrap trials and because we feel that we are very close to a final product (even in the monolayer wrap that was printed, and the outcome of the Next Gen run#2), we would like to suggest that we conduct three experiments on July 5th-6th at Chestnut Run. I have modified the plan template to reflect this. Also note specifically the notes 1 and 2 in the test plan. Based upon our observations during the trial we will make adjustments in the formula and repeat the three structures. Please review ASAP and give me your comments. Thank you.

Kishan Khemani
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-----Original Message-----
From: Jennifer M Schneider [mailto:Jennifer.M.Schneider@usa.dupont.com]
Sent: Friday, June 22, 2001 2:34 PM
To: Donna Balinkie; John Nevling; John L. Kelley; Kishan Khemani; Randy Smith; Kenneth B Atwood; Jeffrey L McGlaughlin; Roger N Byrd
Subject: Revised Wrap plan

This is the revised plan
(See attached file: EarthShell DuPont Test Plan wraps.xls)

disregard previous sent by mistake

EARTHSHELL-DUPONT TEST PLAN

Test Title	Wraps Coextrusion Trials							
Date Planned	06/22/01	**Dates of Test**	7/5 and 7/6	**Location/Facility**	Chestnut Run Bldg 712			
Overall Purpose of Test	Produce a film that would be acceptable to take to Carls Jr.							
Specific Goals of Test	Determine processing conditions for each structure							
	Film thickness: Target is 1.5 mil nominal							
	If time permits, we will also make samples of thinner film at 0.75 mil nominal thickness							
Type of Equipment Needed	Coextrusion cast film line							

Materials Needed	**Description**	**Amount**	**Source**	**Resp.**	**By When**	**Verified**
	Biomax	3,000 lbs	DuPont	JMS	2-Jul	J. Kelley
	Papermatch T3818	2,000 lbs	Earthshell	R.Smith	2-Jul	J. Kelley
	Papermatch T5346	1,000 lbs	Earthshell	R.Smith	2-Jul	J. Kelley
	Papermatch T4338	1,000 lbs	Earthshell	R.Smith	2-Jul	J. Kelley
	Eastar Bio	3,000 lbs	Earthshell	R.Smith	2-Jul	J. Kelley

Test Coverage	**Who**	**Role in Test**	**Test Safety Information**
	J. Kelley	Process knowledge consultant	Safety glasses and safety shoes must be worn
	K. Khemani	Earthshell Technical	
	R. Byrd	Dupont Technical	

Samples Required	**Frequency, amount, labels, etc.**		
	500 feet of each film produced		

Facilities Plan	**Who Schedules Facility**	**Is it Scheduled**	**Specific Time Scheduled**	**Arrive Time**	**Start Time**	**Must End Time**	**Facilities Contact**	**Facilities Address**	**Facilities Phone #**
	JMS	Yes	Yes	7 am	7 am	5pm	Jim Smith	Chestnut run 712	(302)993186
	Description of Equipment	Coextrusion cast line capable of 20 in wide film with 4 extruders							
	Cautions & Vendor Sensitivities								

PRE-TEST PLANNING SHEET

6/21/01

Test Title	Wraps Coextrusion Trials				
Date Planned	06/22/01	**Dates of Test**	7/5 and 7/6	**Location/Facility**	Chestnut Run Bldg 712
Overall Purpose of Test	Produce a film that would be acceptable to take to Carls Jr.				

Pre-Test Preparation Plan

Task	Who	By When	Comments
Inspection of Materials	J. Kelley	2-Jul	Make sure that if material has been sent to warehouse that it is called back for 10:00 am delivery on July 2
Test Preps to Vendor	JMS	26-Jun	
Test Plan to Vendor	JMS	26-Jun	

Detailed Description of Preparations Needed at Facility Before Test Begins

Must have:

1. **Matte chill roll**
2. **Shear rate vs viscosity curves**
3. **5 dryers**
4. **John Kelley present when dryers loaded on July 3**
5. **John Kelley and Kishan present at 7 am to supervise blending and loading of dryers**
6. **Nip roll in place**

DETAILED TEST PLANNING SHEET

6/21/01

Test Title	Wraps Coextrusion Trials				
Date Planned	06/22/01	Dates of Test	7/5 and 7/6	Location/Facility	Chestnut Run Bldg 712
Overall Purpose of Test	Produce a film that would be acceptable to take to Carls Jr.				

Detailed Description of Test Itself:

Describe Task Order

(1) 30% A-Layer: 50% Eastar Bio/T-4338 + 30% Biomax 4026 + 20% Eastar Bio
40% B-Layer: 77% Biomax/T-3818 + 23% Eastar Bio
30% C-Layer: 45% Eastar Bio/T-5346 + 25% Biomax 4026 + 30% Eastar Bio

(2) 50% A-Layer: 50% Eastar Bio/T-4338 + 25% Biomax 4026 + 25% Eastar Bio
50% B-Layer: 77% Biomax/T-3818 + 23% Eastar Bio

(3) 50% A-Layer: 50% Eastar Bio/T-5346 + 25% Biomax 4026 + 25% Eastar Bio
50% B-Layer: 77% Biomax/T-3818 + 23% Eastar Bio

NOTES: 1. If tear strength is very good, increase the %filler by 5% in the B-layers only. 2. If tear strength is poor, increase the %EastarBio by 5% in the A and C layers.

outputs, ts to be

Start with #1 ABC	
Determine processing temperatures (spend no more than 1 hour)	

DETAILED TEST PLANNING SHEET

6/21/01

Details of Each Task: Specify inputs and desired length of time expected to complete, measurements taken.	collect 500 feet (10 minutes)			
	Test elmendorf tear in 713 lab (30 minutes)			
	Change feedblock (1 hour)			
	Run #2 AB (30 minutes to transition)			
	Determine processing temperatures (spend no more than 1 hour)			
	collect 500 feet (10 minutes)			
	Test elmendorf tear in 713 lab			
	Run #3 AB (30 minutes to transition)			
	Determine processing temperatures (spend no more than 1 hour)			
	collect 500 feet (10 minutes)			
	Test elmendorf tear in 713 lab			
	Repeat runs 1-3, if necessary, as per the above notes 1 and 2.			
Other Test Information				
Statistical Design of Test				
Work Planned vs. Facilities Capability	Total Time to Do All Planned Tasks	Total Time Available on Facility	Is There a 25% Time Safety Factor	Does the Test Plan Need to Be Modified?
	8 hours	20 hours	Yes, We can run overtime if we need to	See Notes 1 and 2